CLAIMS

1.   A method comprising:

receiving output from a router in a format describing a type of the output;

querying a server selected as a function of the type of the output; and

providing a response from the server to a user.

2.   The method of claim 1, wherein the output is a numeric address.

3.   The method of claim 2, further comprising:

querying a name server;

receiving from the name server a symbolic name associated with the numeric address; and

providing the symbolic name to the user.

4.   The method of claim 2, further comprising:

querying an owner database;

receiving from the owner database an identification of an owner associated with the numeric address; and

providing the identification of the owner to the user.

5.   The method of claim 2, further comprising:

querying a router policy database;

receiving from the router policy database an identification of one or more router policies associated with the numeric address; and

providing the identification of the one or more router policies to the user.

6.   The method of claim 1, wherein the output is received in an XML-tagged format.

7. The method of claim 1, further comprising rendering the output in text format before querying the server.

8. The method of claim 7, wherein the text format is selected from the group consisting of an ASCII format, a UTF-8 format, and a Unicode format.

9. The method of claim 1, wherein the output comprises a listing of network peers identified by numeric addresses.

10. The method of claim 1, wherein querying a server selected as a function of the type of the output comprises invoking a command line interface (CLI) module to issue a query to the server.

11.   A method for processing an address, the method comprising:

receiving a numeric address in a self-describing format;

querying a name server to resolve the numeric address to a symbolic name; and

providing the symbolic name to a user.

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12.   The method of claim 11, wherein the numeric address is received in an XML-tagged format.

13.   The method of claim 11, further comprising rendering the numeric address in

10   text format before querying the name server.

14.   The method of claim 13, wherein the text format is selected from the group

consisting of an ASCII format, a UTF-8 format, and a Unicode format.

15   15.   The method of claim 11, wherein the numeric address identifies a network

peer.

16.   A method for processing an address, the method comprising:

receiving a command in a user interface module;

invoking a system module to process the command;

receiving an XML-tagged IP address from the system module;

querying a domain name server to resolve the IP address to a symbolic name; and

providing the symbolic name to a user.

17.   The method of claim 16, further comprising rendering the IP address in text format before querying the domain name server.

18.   The method of claim17, wherein the text format is selected from the group consisting of an ASCII format, a UTF-8 format, and a Unicode format.

19.   The method of claim 16, wherein the IP address identifies a network peer.

20.   A processor-readable medium containing instructions for causing a programmable processor to:

receive output in a format describing a type of the output;

query a server selected as a function of the type of the output; and

5   provide a response from the server to a user.

21.   The processor-readable medium of claim 20, wherein the output is a numeric address.

10   22.   The processor-readable medium of claim 21, further containing instructions for causing the programmable processor to:

query a name server;

receive from the name server a symbolic name associated with the numeric address; and

15   provide the symbolic name to the user.

23.   The processor-readable medium of claim 20, further containing instructions for causing the programmable processor to:

query an owner database;

20   receive from the owner database an identification of an owner associated with the numeric address; and

provide the identification of the owner to the user.

24.   The processor-readable medium of claim 20, further containing instructions

25   for causing the programmable processor to:

query a router policy database;

receive from the router policy database an identification of one or more router policies associated with the numeric address; and

provide the identification of the one or more router policies to the user.

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25.   The processor-readable medium of claim 20, wherein the output is received in an XML-tagged format.

26.   The processor-readable medium of claim 20, further containing instructions for causing the programmable processor to render the output in text format before querying the server.

27.   The processor-readable medium of claim 26, wherein the text format is selected from the group consisting of an ASCII format, a UTF-8 format, and a Unicode format.

28.   The processor-readable medium of claim 20, wherein the output comprises a listing of network peers identified by numeric addresses.

29.   A processor-readable medium containing instructions for causing a programmable processor to:

receive a numeric address in a self-describing format;

query a name server to resolve the numeric address to a symbolic name; and

5   provide the symbolic name to a user.

30.   The processor-readable medium of claim 29, wherein the numeric address is received in an XML-tagged format.

10   31.   The processor-readable medium of claim 29, further containing instructions for causing the programmable processor to render the numeric address in text format before querying the name server.

32.   The processor-readable medium of claim 31, wherein the text format is

15   selected from the group consisting of an ASCII format, a UTF-8 format, and a Unicode format.

33.   The processor-readable medium of claim 29, wherein the numeric address identifies a network peer.

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34.   A processor-readable medium containing instructions for causing a
programmable processor to:

receive a command in a user interface module;

invoke a system module to process the command;

receive an XML-tagged IP address from the system module;

query a domain name server to resolve the IP address to a symbolic name; and

provide the symbolic name to a user.

35.   The processor-readable medium of claim 34, further containing instructions
for causing the programmable processor to render the IP address in ASCII format before
querying the domain name server.

36.   The processor-readable medium of claim 35, wherein the text format is
selected from the group consisting of an ASCII format, a UTF-8 format, and a Unicode
format.

37.   The processor-readable medium of claim 34, wherein the IP address identifies
a network peer.

38.   A routing device comprising:

a client interface to receive an operational request from a network router client; and

a system module to process the operational request and to provide output to the client interface in a format that describes a type of the output,

5   wherein the client interface is configured to query a server selected as a function of the type of the output and to provide a response from the server to the network router client.

39.   The routing device of claim 38, wherein the output is a numeric address.

10   40.   The routing device of claim 39, wherein the client interface is further configured to:

query a name server;

receive from the name server a symbolic name associated with the numeric address; and

15   provide the symbolic name to the network router client.

41.   The routing device of claim 39, wherein the client interface is further configured to:

query an owner database;

20   receive from the owner database an identification of an owner associated with the numeric address; and

provide the identification of the owner to the user.

42.   The routing device of claim 39, wherein the client interface is further

25   configured to:

query a router policy database;

receive from the router policy database an identification of one or more router policies associated with the numeric address; and

provide the identification of the one or more router policies to the user.

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43. The routing device of claim 38, wherein the output is provided to the client interface in an XML-tagged format.

44. The routing device of claim 38, wherein the client interface is further configured to render the output in text format before querying the server.

45. The routing device of claim 44, wherein the text format is selected from the group consisting of an ASCII format, a UTF-8 format, and a Unicode format.

46. The routing device of claim 38, wherein the output comprises a listing of network peers identified by numeric addresses.

47. The routing device of claim 38, wherein the system module is a BGP protocol module.

48. The routing device of claim 38, wherein the system module is an OSPF protocol module.

49. The routing device of claim 38, wherein the system module is a firewall filter module.

50. The routing device of claim 38, further comprising a management server module communicatively coupled to the client interface.

51. The routing device of claim 38, further comprising at least one of a chassis module, a device configuration module, and a routing protocol module.

52.   A routing device comprising:

a client interface to receive an operational request from a network router client; and

a system module to process the operational request and to provide a numeric address to the client interface in a self-describing format,

5   wherein the client interface is configured to query a name server to resolve the numeric address to a symbolic name and to provide the symbolic name to the network router client.

53.   The routing device of claim 52, wherein the system module is a BGP protocol

10   module.

54.   The routing device of claim 52, wherein the system module is an OSPF protocol module.

15   55.   The routing device of claim 52, wherein the system module is a firewall filter module.

56.   The routing device of claim 52, further comprising a management server module communicatively coupled to the client interface.

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57.   The routing device of claim 52, further comprising at least one of a chassis module, a device configuration module, and a routing protocol module.

58.   A routing device comprising:

a client interface to receive an operational request from a network router client; and

a system module to process the operational request and to provide an XML-tagged IP address to the client interface,

wherein the client interface is configured to query a domain name server to resolve the IP address to a symbolic name and to provide the symbolic name to the network router client.

59.   The routing device of claim 58, wherein the system module is a BGP protocol module.

60.   The routing device of claim 58, wherein the system module is an OSPF protocol module.

61.   The routing device of claim 58, wherein the system module is a firewall filter module.

62.   The routing device of claim 58, further comprising a management server module communicatively coupled to the client interface.

63.   The routing device of claim 58, further comprising at least one of a chassis module, a device configuration module, and a routing protocol module.

64.   A system comprising:

a client interface to receive an operational request from a network router client;

a system module to process the operational request and to provide output to the client interface in a format that describes a type of the output; and

5   a server to provide a response to the client interface,

wherein the client interface is configured to query the server and to provide the response to the network router client.

65.   A system comprising:

a client interface to receive an operational request from a network router client;

a system module to process the operational request and to provide a numeric address to the client interface in a self-describing format; and

5   a name server to resolve the numeric address to a symbolic name and to provide the symbolic name to the client interface,

wherein the client interface is configured to provide the response to the network router client.

66.   A system comprising:

a client interface to receive an operational request from a network router client;

a system module to process the operational request and to provide an XML-tagged IP address to the client interface; and

5   a domain name server to resolve the IP address to a symbolic name and to provide the symbolic name to the client interface,

wherein the client interface is configured to provide the response to the network router client.

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